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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/830,186	04/22/2004	Tetsuhiko Fukanuma	TIC-0063	7724

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PHILADELPHIA, PA 19104-2891

EXAMINER
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VIDAYATHIL, TRESA V

ART UNIT	PAPER NUMBER
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3746

MAIL DATE	DELIVERY MODE
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06/27/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/830,186

Applicant(s)

FUKANUMA ET AL.

Examiner

Tresa V. Vidayathil

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,7,8 and 11 is/are rejected.
- 7) ☒ Claim(s) 3-6, and 9-10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 4/22/04 and 9/14/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

When the Office received the signed Combined Declaration and Power of Attorney, the Office also received a new specification, abstract, claims, and drawings with no explanation of how these documents are different from the original specification, abstract, claims, and drawings. The Examiner will assume that the new documents are only copies of the originals. The Examiner used the original documents to examine the instant application.

#### ***Specification***

1. The disclosure is objected to because of the following informalities: The word "via" on p. 9, l. 31 should be changed to "via."

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. Claims 1 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelm 2003/0091444 or alternatively, Kelm in view of Irie 6,375,436.

Kelm discloses: compression mechanism 20 which has a rotary shaft (Fig. 1 – extending to the right of 16), electric motor 12, rotary shaft (Fig. 1 shaft extending to the right of 16) of the compression mechanism 20 has a first end (Fig. 1 – not shown, but assumed that the shaft extending to the right of 16 extends through compressor 20 to clutch 28) and a second end (Fig. 1 – at clutch 16), first end (Fig. 1 – not shown, but assumed that the shaft extending to the right of 16 extends through compressor 20 to clutch 28) of the rotary shaft (Fig. 1 shaft extending to the right of 16) is coupled to a rotating body 27 for receiving power from an external drive source 18 (para. 26, ll. 1-3), second end (Fig. 1 – inside clutch 16) of rotary shaft (Fig. 1 shaft extending to the right of 16) is coupled to electric motor 12 for receiving power from the electric motor 12, motor shaft (50 and 48) located in the electric motor 12 (Fig. 1 – not shown, but assumed that part of motor shaft (50 and 48) is located in the electric motor), motor shaft (50 and 48) is separate from the rotary shaft (Fig. 1 – extending to the right of 16) (must be separate for one-way clutch to function), one-way clutch (16, para. 9, and cl. 3) located between the second end (Fig. 1 – at clutch 16) of the rotary shaft (Fig. 1 shaft extending to the right of 16) and the motor shaft (50 and 48), one-way clutch (16, para. 9, and cl. 3) couples the rotary shaft (Fig. 1 shaft extending to the right of 16) to the

motor shaft (50 and 48), one-way clutch (16, para. 9, and cl. 3) is capable of preventing power from being transmitted from the rotary shaft (Fig. 1 shaft extending to the right of 16) to the rotor (although no rotor is disclosed by Kelm, para. 25, ll. 7-9 and para. 27 – indicate that the motor is disengaged when the engine is running the compressor), one-way clutch (16, para. 9, and cl. 3) is used as a coupling between the rotary shaft (Fig. 1 shaft extending to the right of 16) and the motor shaft (50 and 48), assembling a motor shaft (50 and 48) to which a rotor and a one-way clutch (16, para. 9, and cl. 3) are mounted in advance to the rotary shaft (Fig. 1 shaft extending to the right of 16) along the axial direction (See Fig. 1).

Note that although, Kelm does not disclose a rotor of the electric motor 12, it can be assumed that this electric motor 12 is likely to have a rotor and the motor shaft (50 and 48) supports the rotor.

Alternatively, Irie teaches an electric motor 70 with a rotor 73 and a motor shaft 11 that supports the rotor 73 (see col. 4, ll. 5-20 instead of figures for appropriate reference numerals). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kelm with a rotor and a motor shaft supporting that rotor, as taught by Irie, in order to apply a torque to the compressor shaft (col. 4, ll. 5-20).

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kelm or alternatively Kelm in view of Irie as applied to claim 1 above, and further in view of Mohrmann 2003/0108434.

Kelm or Kelm in view of Irie discloses all the limitations substantially as claimed except for the following taught by Mohrmann: motor shaft 30 (Fig. 2 – rotor 30 is acting as the motor shaft in this application; para. 13, ll. 8-10 and para. 14, ll. 1-4) has an end (Fig. 1 – see left end of motor shaft 30) that includes a cylindrical inner circumferential surface (see Fig. 2), second end (Fig. 1 – right side (16A and 16B)) of rotary shaft (16 and 36) has an outer circumferential surface (See Fig. 2), wherein the inner circumferential surface (see Fig. 2) of the end (Fig. 1 – see left end of motor shaft 30) of the motor shaft (Fig. 2 – rotor 30 is acting as the motor shaft in this application; para. 13, ll. 8-10 and para. 14, ll. 1-4) surrounds the outer circumferential surface (see Fig. 2) of the second end (Fig. 1 – right side (16A and 16B)) of the rotary shaft (16 and 36), and one-way clutch (35, 34 and 33) is located in a space between the outer circumferential surface (see Fig. 2) and the inner circumferential surface (see Fig. 2) (para. 13, ll. 8-10 and para. 14, ll. 1-4).

Note that the Examiner has interpreted features 16 and 36 as the rotary shaft. Making elements of an apparatus integral fails to patentably distinguish the applicant's invention over the prior art (MPEP § 2144.04.V.B). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to integrate the two parts into one part in order to reduce the number of features in the overall apparatus and ease assembly.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kelm or alternatively Kelm in view of Irie as applied to claim 1 above, and further in view of Irie.

Kelm in view of Irie discloses all the limitations substantially as claimed. Irie further teaches (see col. 4, ll. 5-20 instead of figures for appropriate reference numerals): electric motor 70 including a stator 71 and a motor housing (See Fig. 1 - outer shell of electric motor 70), wherein the motor housing (See Fig. 1 - outer shell of electric motor 70) rotatably supports the motor shaft 11 and accommodates the stator 71 and the rotor 73, and electric motor 70 is formed as a unit (See Fig. 1 and col. 4, ll. 5-20).

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kelm or alternatively Kelm in view of Irie as applied to claim 1 above, and further in view of Mohrmann and Sakai 6,234,769.

Kelm or Kelm in view of Irie discloses all the limitations substantially as claimed. However, Kelm or Kelm in view of Irie does not disclose the following limitations taught by Mohrmann: one-way clutch (33, 35, and 34) comprising a plurality of recesses (33 and 35) formed in the motor shaft 30 (Fig. 2 – rotor 30 is acting as the motor shaft in this application; para. 13, ll. 8-10 and para. 14, ll. 1-4) about an axis (see Fig. 2) of the motor shaft 30, plurality of rollers 34 wherein each roller is accommodated in one of the recesses (33 and 35), each roller 34 is movable between an engaged position where the roller 34 is engaged with the inner surface of the corresponding recess (33 and 35) and the rotary shaft (16 and 36) (para. 13, ll. 8-10 and para. 14), disengaged position where the roller 34 is apart from the engaged position (para. 13, ll. 8-10 and para. 14), when each roller 34 is at the engaged position the rotary shaft (16 and 36) and the

motor shaft 30 (Fig. 2 – rotor 30 is acting as the motor shaft in this application; para. 13, ll. 8-10 and para. 14, ll. 1-4) are rotated in the same direction (para. 13, ll. 8-10 and para. 14).

Note that the Examiner has interpreted features 16 and 36 as the rotary shaft. Making elements of an apparatus integral fails to patentably distinguish the applicant's invention over the prior art (MPEP § 2144.04.V.B). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to integrate the two parts into one part in order to reduce the number of features in the overall apparatus and ease assembly.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kelm or Kelm in view of Irie, with a motor shaft with recesses on the exterior, balls, and a compressor shaft at the center, as taught by Mohrmann, in order for the rotor to remain at rest when the engine is driving the driveshaft and when the motor is running the motor locks to the driveshaft and turns the compressor (para. 13, ll. 8-10 and para. 14).

However, Kelm in view of Mohrmann or Kelm in view of Irie in view of Mohrmann does not disclose the following limitations that are taught by Sakai: plurality of springs 653, and each spring 653 urges the corresponding roller 652 towards the engaged position (see Figs. 10A and 10B).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kelm in view of Mohrmann or Kelm in view of Irie in view of Mohrmann with a spring, as taught by Sakai, in order to reduce engagement



vibrations and prevent delays in engagement by guiding the ball directly into the engagement position.

***Allowable Subject Matter***

8. Claims 3-6 and 9-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is an examiner's statement of reasons for allowance: The prior art does not teach in combination with the other limitations of the independent claim a housing accommodating a sealing member that seals the motor shaft and permits the one-way clutch to be located in the housing.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tresa V. Vidayathil whose telephone number is (571) 272-3436. The examiner can normally be reached on 9AM - 5:30PM, Monday - Friday.

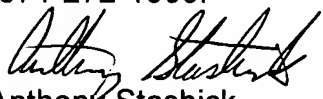
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Stashick can be reached on (571) 272-4561. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
TVV

  
Anthony Stashick  
Supervisory Primary Examiner  
Art Unit 3746